CLAIMS

1. A method for characterizing an ovarian cell, the method comprising:

determining the presence or absence of a CD43 molecule in an ovarian cell of a subject to characterize the ovarian cell.

2. The method of claim 1, wherein the method is diagnostic and wherein the presence of a CD43 molecule in the ovarian cell indicates that the subject has an ovarian tumor.

3. The method of claim 1, wherein the method is prognostic.

4. The method of claim 1, wherein the CD43 molecule is a CD43 nucleic acid.

5. The method of claim 1, wherein the CD43 molecule is a CD43 protein.

6. The method of claim 1, wherein determining the presence or absence of a CD43 molecule is performed *in vivo*.

7. The method of claim 1, wherein determining the presence or absence of a CD43 molecule is performed *in vitro*.

8. The method of any one of claims 1–7, wherein determining the presence or absence of a CD43 molecule is done in the presence of a CD43 binding molecule.

9. The method of claim 8, wherein the CD43 binding molecule is a CD43 antibody.

10. The method of claim 9, wherein the CD43 antibody thereof is bound to a label.

11. The method of claim 10, wherein the label is selected from the group consisting of a fluorescent label, an enzyme label, a radioactive label, a nuclear magnetic resonance active label, a luminescent label, and a chromophore label.

12. The method of claim 8, wherein the CD43 binding molecule is an antigen-binding fragment of a CD43 antibody.

13. The method of claim 9, wherein the CD43 antibody is a CD43 monoclonal antibody.

14. The method of claim 13, wherein the CD43 monoclonal antibody is selected from the group consisting of: BS1, MEM-59, 84-3C1, Bra7G, DF-T1, 1G10, MT1, L10, L14, T2/53, B1-B6, L60, BL-GCE/G3, 6E5, 6F5, 10G7, G10-2, G19-1, DS 1.C1, L66, CBF.78, 148.1B6, 148.1C3, 148.3D4, 161.46, RDP.AD9, OH.01, HI165, and HI161.

15. A method of treating a subject having or at risk of having a tumor, comprising:

administering to a subject in need of such treatment one or more CD43 inhibitors in an effective amount to treat the tumor.

16. The method of claim 15, wherein the CD43 inhibitor is a CD43 nucleic acid binding molecule.

17. The method of claim 16, wherein the CD43 nucleic acid binding molecule is an hnRNP-K molecule.

18. The method of claim 17, wherein the hnRNP-K molecule is a hnRNP-K nucleic acid.

19. The method of claim 17, wherein the hnRNP-K molecule is a hnRNP-K protein.

20. The method of claim 15, wherein the CD43 inhibitor is transcription factor

21. The method of claim 20, wherein the transcription factor is a Purα molecule.

22. The method of claim 21, wherein the Purα molecule is a Purα nucleic acid.

23. The method of claim 21, wherein the Purα molecule is a Purα protein.

24. The method of claim 15, wherein the CD43 inhibitor is a CD43 antisense molecule.

25. The method of claim 15, wherein the CD43 inhibitor is a CD43 antibody.

26. The method of claim 25, wherein the CD43 antibody is bound to a radioisotope.

27. The method of claim 26, wherein the radioisotope emits α radiations.

28. The method of claim 26, wherein the radioisotope emits β radiations.

29. The method of claim 26, wherein the radioisotope emits γ radiations.

30. The method of claim 26, wherein the radioisotope is selected from the group consisting of ^{225}Ac, ^{211}At, ^{212}Bi, ^{213}Bi, ^{186}Rh, ^{188}Rh, ^{177}Lu, ^{90}Y, ^{131}I or ^{67}Cu, ^{125}I, ^{123}I, and ^{77}Br.

31. The method of claim 25, wherein the CD43 antibody is bound to a therapeutic moiety.

32. The method of claim 31, wherein the therapeutic moiety is a drug.

33. The method of claim 32, wherein the drug is a cytotoxic drug.

34. The method of claim 33, wherein the cytotoxic drug is selected from the group consisting of: calicheamicin, esperamicin, methotrexate, doxorubicin, melphalan, chlorambucil, ARA-C, vindesine, mitomycin C, cis-platinum, etoposide, bleomycin, and 5-fluorouracil.

35. The method of claim 31, wherein the therapeutic moiety is a toxin or a fragment thereof.

36. The method of claim 31, wherein the therapeutic moiety is an enzyme or a fragment thereof.

37. The method of claim 25, wherein the CD43 antibody is a CD43 polyclonal antibody.

38. The method of claim 25, wherein the CD43 antibody is a CD43 monoclonal antibody.

39. The method of claim 38, wherein the CD43 monoclonal antibody is selected from the group consisting of: BS1, MEM-59, 84-3C1, Bra7G, DF-T1, 1G10, MT1, L10, L14, T2/53, 1-B6, L60, BL-GCE/G3, 6E5, 6F5, 10G7, G10-2, G19-1, DS 1.C1, L66, CBF.78, 148.1B6, 148.1C3, 148.3D4, 161.46, RDP.AD9, OH.01, HI165, and HI161.

40. The method of claim 15, wherein the tumor is a solid tumor selected from the group consisting of: biliary tract cancer, brain cancer (including glioblastomas and medulloblastomas), breast cancer, cervical cancer, choriocarcinoma, colon cancer, endometrial cancer, esophageal cancer, gastric cancer, intraepithelial neoplasms, including Bowen's disease and Paget's disease, liver cancer, lung cancer, lymphomas, including Hodgkin's disease and lymphocytic lymphomas, neuroblastomas, oral cancer, including squamous cell carcinoma, ovarian cancer, including those arising from epithelial cells, stromal cells, germ cells and mesenchymal cells, pancreatic cancer, prostate cancer, rectal cancer, renal cancer including adenocarcinoma and Wilms tumor, sarcomas, including leiomyosarcoma, rhabdomyosarcoma, liposarcoma, fibrosarcoma and osteosarcoma, skin cancer, including melanoma, Kaposi's sarcoma, basocellular cancer and squamous cell cancer, testicular cancer, including germinal tumors (seminomas, and non-seminomas such as teratomas and choriocarcinomas), stromal tumors and germ cell tumors, and thyroid cancer, including thyroid adenocarcinoma and medullary carcinoma.

41. The method of claim 15, wherein the tumor is a non-solid tumor selected from the group of hematological neoplasms including: acute or chronic lymphocytic and myelogenous leukemia, multiple myeloma, AIDS associated leukemias and adult T-cell lymphoma/leukemia.

42. The method of claim 15, wherein the tumor is ovarian cancer.

43. The method of any one of claims 15-42, further comprising administering one or more anti-tumor therapy.

44. The method of claim 43, wherein the anti-tumor therapy comprises surgery, radiation therapy, or a chemotherapeutic agent.

45. The method of claim 43, wherein the anti-tumor therapy comprises an anti-ovarian tumor therapy.

46. The method of claim 45, wherein the anti-ovarian tumor therapy is an anti-ovarian tumor chemotherapeutic agent.

47. The method of claim 46, wherein the anti-ovarian tumor chemotherapeutic agent comprises cisplatin (Platinol) or platinum-containing drug combinations.

48. The method of claim 46,wherein the anti-ovarian tumor chemotherapeutic agent comprises one or more agents selected from the group consisting of : vinblastin, bleomycin, etoposide, hexamethylmelanine, gemcitabine, topotecan, isofosfamide, alkylating agents, progestational agents, and antiestrogens.

49. The method of claim 48, wherein the alkylating agent is selected from the group consisting of: Mechlorethamine (nitrogen mustard; HN2; Mustargen), Chlorambucil (Leukeran), Cyclophosphamide (Cytoxan), Melphalan (Alkeran), Thiotepa (triethylenethiophosphoramide), Busulfan (Myleran), Carmustine (BCNU), Lomustine

(CCNU), Semustine (methyl-CCNU), Altretamine (hexamethyl-melamine), Procarbazine (Matulane), Dacarbazine, and Carboplatin (Paraplatin).

50. The method of claim 48, wherein the progestational agent is selected from the group consisting of: progesterone, progesterone derivative, 17-ethinyl testosterone derivative, and 19-nortestosterone derivative.

51. The method of claim 48, wherein the progesteron derivative is selected from the group consisting of: hydroxyprogesterone caproate, medroxyprogesterone acetate, and megestrol acetate.

52. The method of claim 50, wherein the 17-ethinyl testosterone derivative is Dimethisterone.

53. The method of claim 50, wherein the 19-nortestosterone derivative is selected from the group consisting of: Desogestrel, Norethynodrel, Lynestrenol, Norethindrone, Norethindrone acetate, Ethynodiol diacetate, and L-Norgestrel.

54. The method of claim 48, wherein the antiestrogen is selected from the group consisting of: Tamoxifen, anastrozole, and a combination of aminoglutethimide and hydrocortisone.

55. The method of claim 15, wherein the ovarian tumor is selected from the group consisting of: serous cystoma, mucinous cystoma, endometrioid tumor, mesonephric tumor, transitional cell (Brenner) tumor, dermoid tumor, teratoma, fibroma, thecoma, luteoma, granulosa cell tumor, struma ovarii, dysgerminoma, malignant mixed mesodermal tumor, and carcinoma.

56. The method of claim 55, wherein the serous cystoma is a serous benign cystadenoma, a serous cystadenoma, or a serous cystadenocarcinoma.

57. The method of claim 55, wherein the mucinous cystoma is a mucinous benign cystadenoma, a mucinous cystadenoma, or a mucinous cystadenocarcinoma.

58. The method of claim 55, wherein the endometrioid tumor is an endometrioid benign cyst, or an endometrioid adenocarcinoma.

59. The method of claim 55, wherein the mesonephric tumor is a benign mesonephric tumor, or a mesonephric cystadenocarcinoma.

60. The method of claim 55, wherein the carcinoma is a clear cell carcinoma.

61. The method of claim 15, wherein the ovarian tumor has metastasized beyond the ovary.

62. A method for assessing the regression or progression of an ovarian tumor in a subject with comprising the steps of:

measuring in a first ovarian cell obtained from the subject, the presence of a CD43 molecule,

measuring in a second ovarian cell obtained from the subject, the presence of a CD43 molecule,

comparing the presence of the CD43 molecule in the first ovarian cell and the second ovarian cell,

wherein a decrease in the presence of the CD43 molecule in the second ovarian cell compared to the first ovarian cell indicates regression of the ovarian tumor, and

wherein an increase in the presence of the CD43 molecule in the second ovarian cell compared to the first ovarian cell indicates progression of the ovarian tumor.

63. The method of claim 62, wherein the CD43 molecule is a CD43 nucleic acid.

64. The method of claim 62, wherein the CD43 molecule is a CD43 protein.

65. The method of claim 62, wherein measuring the presence of a CD43 molecule is performed *in vivo*.

66. The method of claim 62, wherein measuring the presence of a CD43 molecule is performed *in vitro*.

67. The method of any one of claims 62–66, wherein measuring the presence of a CD43 molecule is done in the presence of a CD43 binding molecule.

68. The method of claim 67, wherein the CD43 binding molecule is a CD43 antibody.

69. The method of claim 68, wherein the CD43 antibody is a CD43 polyclonal antibody.

70. The method of claim 68, wherein the CD43 antibody is a CD43 monoclonal antibody.

71. The method of claim 70, wherein the CD43 monoclonal antibody is selected from the group consisting of: BS1, MEM-59, 84-3C1, Bra7G, DF-T1, 1G10, MT1, L10, L14, T2/53, B1-B6, L60, BL-GCE/G3, 6E5, 6F5, 10G7, G10-2, G19-1, DS 1.C1, L66, CBF.78, 148.1B6, 148.1C3, 148.3D4, 161.46, RDP.AD9, OH.01, HI165, and HI161.

72. A kit for diagnosing an ovarian tumor, comprising:

one or more CD43 binding molecules,

one or more control agents, and

instructions for the use of the CD43 binding molecules, and the control agents in the diagnosis of an ovarian tumor.

73. The kit of claim 72, wherein the CD43 binding molecule binds a CD43 nucleic acid.

74. The kit of claim 72, wherein the CD43 binding molecule binds a CD43 protein.

75. The kit of claim 72, wherein diagnosing an ovarian tumor is performed *in vivo*.

76. The kit of claim 72, wherein diagnosing an ovarian tumor is performed *in vitro*.

77. The kit of claim 72, wherein the CD43 binding molecule is a CD43 antibody.

78. The kit of claim 77, wherein the CD43 antibody is a CD43 polyclonal antibody.

79. The kit of claim 77, wherein the CD43 antibody is a CD43 monoclonal antibody.

80. The kit of claim 79, wherein the CD43 monoclonal antibody is selected from the group consisting of: BS1, MEM-59, 84-3C1, Bra7G, DF-T1, 1G10, MT1, L10, L14, T2/53, B1-B6, L60, BL-GCE/G3, 6E5, 6F5, 10G7, G10-2, G19-1, DS 1.C1, L66, CBF.78, 148.1B6, 148.1C3, 148.3D4, 161.46, RDP.AD9, OH.01, HI165, and HI161.

81. The kit of claim 72, wherein the one or more control agents are bound to a substrate.

82. A method of reducing the number of white blood cells in a subject comprising administering to a subject in need of a reduction in the number of white blood cells, a CD43 inhibitor in an effective amount to reduce the number of white blood cells in said subject.

83. The method of claim 82, wherein the CD43 inhibitor is a hnRNP-K molecule.

84. The method of claim 83, wherein the hnRNP-K molecule is a hnRNP-K nucleic acid.

85. The method of claim 83, wherein the hnRNP-K molecule is a hnRNP-K protein.

86. The method of claim 82, wherein the CD43 inhibitor is transcription factor.

87. The method of claim 86, wherein the transcription factor is a Purα molecule.

88. The method of claim 87, wherein the Purα molecule is a Purα nucleic acid.

89. The method of claim 87, wherein the Purα molecule is a Purα protein.

90. The method of claim 82, wherein the CD43 inhibitor is a CD43 antisense molecule.

91. The method of claim 82, wherein the CD43 inhibitor is a CD43 antibody.

92. The method of claim 91, wherein the CD43 antibody is a CD43 polyclonal antibody.

93. The method of claim 91, wherein the antibody is a CD43 monoclonal antibody.

94. The method of claim 93, wherein the CD43 monoclonal antibody is selected from the group consisting of: BS1, MEM-59, 84-3C1, Bra7G, DF-T1, 1G10, MT1, L10, L14, T2/53, B1-B6, L60, BL-GCE/G3, 6E5, 6F5, 10G7, G10-2, G19-1, DS 1.C1, L66, CBF.78, 148.1B6, 148.1C3, 148.3D4, 161.46, RDP.AD9, OH.01, HI165, and HI161.

95. The method of claim 82, wherein the subject has a white blood cell tumor selected from the group consisting of: acute leukemias, chronic leukemias, and lymphomas.

96. The method of claim 82, wherein the subject is about to undergo, is undergoing, or has undergone a bone marrow, organ, cellular, or material transplant.

97. The method of any of claims 82-96, further comprising administering a second therapy to reduce the number of white blood cells.

98. A method of inhibiting a CD promoter comprising contacting the CD promoter with a CD43 inhibitor in an amount effective to inhibit the CD promoter.

99. The method of claim 98, wherein the CD43 inhibitor is a hnRNP-K molecule.

100. The method of claim 99, wherein the hnRNP-K molecule is a hnRNP-K nucleic acid.

101. The method of claim 99, wherein the hnRNP-K molecule is a hnRNP-K protein.

102. The method of claim 98, wherein the CD43 inhibitor is transcription factor.

103. The method of claim 102, wherein the transcription factor is a Pura molecule.

104. The method of claim 103, wherein the Pura molecule is a Pura nucleic acid.

105. The method of claim 103, wherein the Pura molecule is a Pura protein.

106. The method of claim 98, wherein the CD43 inhibitor is a CD43 antisense molecule.

107. The method of claim 98, wherein the CD43 inhibitor is a CD43 antibody.

108. The method of claim 107, wherein the CD43 antibody is a CD43 polyclonal antibody.

109. The method of claim 107, wherein the antibody is a CD43 monoclonal antibody.

110. The method of claim 109, wherein the CD43 monoclonal antibody is selected from the group consisting of: BS1, MEM-59, 84-3C1, Bra7G, DF-T1, 1G10, MT1, L10, L14,

T2/53, B1-B6, L60, BL-GCE/G3, 6E5, 6F5, 10G7, G10-2, G19-1, DS 1.C1, L66, CBF.78, 148.1B6, 148.1C3, 148.3D4, 161.46, RDP.AD9, OH.01, HI165, and HI161.

111. The method of claim 98, further comprising administering a Pura molecule.

112. The method of claim 98, wherein the CD promoter is inhibited *in vivo*.

113. The method of claim 98, wherein the CD promoter is inhibited *in vitro*.

114. The method of claim 98, wherein the CD promoter is selected from the group consisting of: CD43, CD11a, CD11b, CD11c, and CD11d.